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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,306	01/13/2005	Noel Alfred Warner		5038

7590
Professor N A Warner
40 High House Drive
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Birmingham, B45 8ET
UNITED KINGDOM

04/17/2009

EXAMINER

MC GUTHRY BANKS, TIMA MICHELE

ART UNIT	PAPER NUMBER
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1793

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/521,306

Applicant(s)

WARNER, NOEL ALFRED

Examiner

TIMA M. MCGUTHRY-BANKS

Art Unit

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-15 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Status of Claims

Claims 1, 5-9 and 11-15 are currently amended, Claims 2-4 and 10 are as originally filed and Claim 17 is cancelled.

Allowable Subject Matter

The indicated allowability of claims 1-4 is withdrawn in view of the rejections under 35 U.S.C. 112, first paragraph for Claims 1-3 and the improper multiple dependency of Claim 4.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

In Claim 1 step (vii), applicant has "steps and (v) (vi)." The claim should read "steps (v) and (vi)." Correction is required.

In Claim 1 step (viii), applicant has "solid particles prior to step , (v) (vi) and (vii)." The claim should read "steps (v), (vi) and (vii)." Correction is required.

Claim 4 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim 4 has not been further treated on the merits.

Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 1 incorporates the same limitations set forth in Claim 14. Therefore, Claim 14 does not further limit Claim 1.

Response to Amendment

Applicant filed a marked-up copy and a clean copy of the claims on 2 January 2009. However, the marked-up copy does not match the clean copy, and the clean copy includes non-amended subject matter that does not match the original claims filed on 13 January 2005. Therefore, the examiner is using the marked-up copy for this office action.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 and 5-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Step (i) of Claim 1 includes "direct contact or via gaseous intermediates within the layer of composite charge materials." Step (iii) of Claim 1 includes "a

desulphurisation/decarburization zone." These limitations are not in the disclosure as originally filed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 and 5-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the first carrier material" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the charge layer" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the reduction arm" in line 18. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the second carrier material" in line 25. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the metallised raft" in line 27. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "a metallised raft" in line 30. It is not clear if this raft is the same as in line 27.

Claim 1 recites the limitation "the gaseous oxygen mixture" in line 38. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the composite charge added in step (iii)" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim since the composite charge is added in step (i).

Claim 11 recites the limitation "the carbon monoxide produced in step (iv)" in lines 1 and 2. There is insufficient antecedent basis for this limitation in the claim since the carbon monoxide is produced in step (ii).

Claim 12 recites "hot gas clean up is effected between steps (iv) and (viii)." However, applicant has since changed these steps to (ii) and (vii). It is not clear if this step still occurs at the claimed steps.

Claim 15 recites the limitation "the refining loop" in line 2. There is insufficient antecedent basis for this limitation in the claim since the refining loop does not occur in step (vii).

Conclusion

The claims are free from prior art rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMA M. MCGUTHRY-BANKS whose telephone number is (571)272-2744. The examiner can normally be reached on M-F 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Wyszomierski/
Primary Examiner
Art Unit 1793

/T. M. M./
Examiner, Art Unit 1793
17 April 2009